

NOTICE

All drawings located at the end of the document.

**INDUSTRIAL AREA
SAMPLING AND ANALYSIS PLAN
FY02 ADDENDUM #IA-02-07
SOLAR EVAPORATION PONDS
AREA OF CONCERN**



August 2002

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

ADMIN RECORD

IA-A-001065

1/23

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FY02 ADDENDUM #IA-02-07
SOLAR EVAPORATION PONDS
AREA OF CONCERN**

Approval received from the Colorado Department of Public Health and Environment

August 1, 2002

Approval letter is contained in the Administrative Record.

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ACRONYMS

AOC	Area of Concern
FY	Fiscal Year
HPGe	high-purity germanium
HRR	Historical Release Report
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
MDL	method detection limit
N/A	not applicable
OPWL	Original Process Waste Lines
OU	Operable Unit
PAC	Potential Area of Concern
PCOC	potential contaminant of concern
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
SEP	Solar Evaporation Ponds
SVOC	semivolatile organic compound
VOC	volatile organic compound

1.0 INTRODUCTION

This Industrial Area (IA) Sampling and Analysis Plan (SAP) (IASAP) (DOE 2001) Addendum #IA-02-07 includes specific information, sampling locations, and potential contaminants of concern (PCOCs) for the Solar Evaporation Ponds (SEP) Area of Concern (AOC) and Potential Areas of Concern (PACs) sites proposed for characterization during Fiscal Year (FY) 02. This IASAP Addendum is a supplement to the IASAP (DOE 2001). The location of the SEP AOC is shown on Figure 1.

This IASAP Addendum includes data and proposed sampling locations for PAC-1310, Original Process Waste Lines (OPWL), Resource Conservation and Recovery Act (RCRA) units, and other miscellaneous areas listed in Table 1. Data in areas not proposed for sampling are of sufficient quantity and quality so that additional sampling is not required.

Table 1
IASAP Addendum #IA-02-07 SEP AOC Areas

IHSS Group	SEP AOC Area
000-1	Solar Evaporation Pond – Area of Concern – Original Process Waste Line Valve Vaults
	PAC 900-1310 – Interceptor Trench System Water Spill
	Potential Leaking OPWL
	RCRA Unit 21
	RCRA Unit 48
	Miscellaneous Sumps
	Area Potentially Impacted by Regrading

The purpose of sampling in the SEP AOC is to determine if contamination is present at specific locations where soil or component removal is anticipated and in areas that may be affected by regrading.

2.0 EXISTING CHARACTERIZATION INFORMATION

Existing concentrations and activities above the background mean plus two standard deviations, or method detection limit for areas around OPWL, valve vaults, and PAC 900-1310, are presented on maps in Section 4.0. Table 2 presents the PCOCs. Existing information and data for the SEP AOC are available in Appendix C to the IASAP (DOE 2001), the Industrial Area Data Summary Report (DOE 2000), the Operable Unit (OU) 4 Solar Evaporation Ponds Interim Measure/Interim Remedial Action Environmental Assessment Decision Document, Parts I through V (DOE 1995a), Solar Evaporation Pond 207 C Characterization Report for the Rocky Flats Environmental Technology Site (DOE 1995b), Final Solar Ponds Plume Decision Document (DOE 1999a), Draft Solar Ponds Plume Decision Document Modification (DOE 2002), and Final Closeout Report Building 788 & Clarifier Tank RCRA Closure Decommissioning Project (DOE 1999b).

3.0 SAMPLING

The proposed sampling specifications (number and types of samples) for each AOC area and for the areas potentially impacted by regrading are listed in Table 3. Proposed new sampling locations are the starting point for characterization. After characterization starts, the number and type of samples may change based on sampling results. Changes to sampling specifications will be considered in consultation with the regulatory agencies. A biased sampling methodology was used to determine the new sampling locations.

4.0 MAPS

Maps in this section are organized to present existing sampling results at specific areas of interest. All existing sampling locations and existing data, where available, are presented followed by the proposed new sampling locations.

5.0 REFERENCES

DOE, 1992 – 2001, Historical Release Report for the Rocky Flats Plant, Golden, Colorado.

DOE, 1995a, OU 4 Solar Evaporation Ponds Interim Measure/Interim Remedial Action Environmental Assessment Decision Document, Parts I through V, Rocky Flats Environmental Technology Site, Golden, Colorado, February

DOE, 1995b, Solar Evaporation Pond 207 C Characterization Report for the Rocky Flats Environmental Technology Site, Golden, Colorado, December

DOE, 1999a, Final Solar Ponds Plume Decision Document, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

DOE, 1999b, Final Closeout Report Building 788 & Clarifier Tank RCRA Closure Decommissioning Project, Rocky Flats Environmental Technology Site, Golden, Colorado, October.

DOE, 2000, Rocky Flats Environmental Technology Site Industrial Area Data Summary Report, Golden, Colorado, September.

DOE, 2001, Industrial Area Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

DOE, 2002, Draft Solar Ponds Plume Decision Document Modification, Rocky Flats Environmental Technology Site, Golden, Colorado, April.

Table 2
Potential Contaminants of Concern

IHSS Group	IHSS/PAC/UBC Site	PCOCs	Media	Data Source	Sampling Location Method
000-1	Solar Evaporation Pond – Area of Concern – OPWL Valve Vaults	Radionuclides Metals Nitrates	Subsurface Soil	HRR (DOE 1992-2001) Process knowledge (IASAP [DOE 2001]) IA Data Summary Report (DOE 2000)	Biased
	PAC 900-1310 – Interceptor Trench System Water Spill	Radionuclides Metals Nitrates	Surface Soil	HRR (DOE 1992-2001) Process knowledge (IASAP [DOE 2001]) IA Data Summary Report (DOE 2000)	Biased
	Potential Leaking OPWL	Radionuclides Metals Nitrates	Subsurface Soil	HRR (DOE 1992-2001) Process knowledge (IASAP [DOE 2001]) IA Data Summary Report (DOE 2000)	Biased
	RCRA Unit 21	Radionuclides Metals	Surface Soil	HRR (DOE 1992-2001) Process knowledge (IASAP [DOE 2001]) IA Data Summary Report (DOE 2000)	Biased
	RCRA Unit 48	Radionuclides Metals	Surface Soil	HRR (DOE 1992-2001) Process knowledge (IASAP [DOE 2001]) IA Data Summary Report (DOE 2000)	Biased
	Miscellaneous Sumps	Radionuclides Metals Nitrates	Subsurface Soil	HRR (DOE 1992-2001) Process knowledge (IASAP [DOE 2001]) IA Data Summary Report (DOE 2000)	Biased
	Area Potentially Affected by Regrading	N/A	Surface and Subsurface Soil	N/A	Biased

HRR Historical Release Report
 N/A not applicable
 SVOC semi-volatile organic compound
 VOC volatile organic compound

Table 3
Sampling Specifications

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Onsite Method	Offsite Laboratory Method
000-1	Solar Evaporation Pond – Area of Concern – PAC 900-1310 – Interceptor Trench System Water Spill	CM47-000A	2085231.276	750926.308	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CM47-000A	2085231.276	750926.308	Surface Soil	0-0.5'	Metals	6200	6010
		CM47-000A	2085231.276	750926.308	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CM47-001A	2085220.549	750880.337	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CM47-001A	2085220.549	750880.337	Surface Soil	0-0.5'	Metals	6200	6010
		CM47-001A	2085220.549	750880.337	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CM47-002A	2085245.067	750878.805	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CM47-002A	2085245.067	750878.805	Surface Soil	0-0.5'	Metals	6200	6010
		CM47-002A	2085245.067	750878.805	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CM48-000A	2085219.017	750972.278	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CM48-000A	2085219.017	750972.278	Surface Soil	0-0.5'	Metals	6200	6010
		CM48-000A	2085219.017	750972.278	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CM48-001A	2085243.534	750975.342	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CM48-001A	2085243.534	750975.342	Surface Soil	0-0.5'	Metals	6200	6010
		CM48-001A	2085243.534	750975.342	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CJ47-000A	2084599.952	750938.566	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CJ47-000A	2084599.952	750938.566	Surface Soil	0-0.5'	Metals	6200	6010
		CJ47-001A	2084590.758	750887.999	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CJ47-001A	2084590.758	750887.999	Surface Soil	0-0.5'	Metals	6200	6010
		CJ47-002A	2084612.211	750887.999	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CJ47-002A	2084612.211	750887.999	Surface Soil	0-0.5'	Metals	6200	6010
		CJ48-000A	2084587.694	750990.666	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CJ48-000A	2084587.694	750990.666	Surface Soil	0-0.5'	Metals	6200	6010
		CJ48-001A	2084613.743	750989.133	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CJ48-001A	2084613.743	750989.133	Surface Soil	0-0.5'	Metals	6200	6010
	RCRA Unit 48	CJ47-003A	2084612.211	750858.885	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Onsite Method	Offsite Laboratory Method
		CJ47-003A	2084612.211	750858.885	Surface Soil	0-0.5'	Metals	6200	6010
		CJ47-004A	2084621.405	750845.094	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CJ47-004A	2084621.405	750845.094	Surface Soil	0-0.5'	Metals	6200	6010
		CJ47-004A	2084621.405	750845.094	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CJ47-004A	2084621.405	750845.094	Surface Soil	0-0.5'	Metals	6200	6010
		CJ47-005A	2084606.082	750831.303	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CJ47-005A	2084606.082	750831.303	Surface Soil	0-0.5'	Metals	6200	6010
		CJ47-006A	2084632.131	750861.949	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CJ47-006A	2084632.131	750861.949	Surface Soil	0-0.5'	Metals	6200	6010
		CJ47-007A	2084633.664	750831.303	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CJ47-007A	2084633.664	750831.303	Surface Soil	0-0.5'	Metals	6200	6010
		CK47-000A	2084911.017	750955.422	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CK47-000A	2084911.017	750955.422	Surface Soil	0-0.5'	Metals	6200	6010
		CK47-001A	2084907.952	750946.228	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CK47-001A	2084907.952	750946.228	Surface Soil	0-0.5'	Metals	6200	6010
		CK47-002A	2084918.679	750946.228	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CK47-002A	2084918.679	750946.228	Surface Soil	0-0.5'	Metals	6200	6010
		CK48-000A	2084903.355	750964.616	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CK48-000A	2084903.355	750964.616	Surface Soil	0-0.5'	Metals	6200	6010
		CK48-001A	2084921.743	750963.084	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CK48-001A	2084921.743	750963.084	Surface Soil	0-0.5'	Metals	6200	6010
		CK45-000D	2084921.401	750425.699	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
	OPWL Valve Vault Southeastern Side of AOC	CK45-000D	2084921.401	750425.699	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CK45-000D	2084921.401	750425.699	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CK45-001D	2084913.061	750430.703	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CK45-001D	2084913.061	750430.703	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CK45-001D	2084913.061	750430.703	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CK45-002D	2084909.725	750417.358	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CK45-002D	2084909.725	750417.358	Subsurface Soil	4.5'-6.5'	Metals	6200	6010

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Onsite Method	Offsite Laboratory Method
		CK45-002D	2084909.725	750417.358	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CK45-003D	2084931.409	750419.027	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CK45-003D	2084931.409	750419.027	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CK45-003D	2084931.409	750419.027	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CL45-012D	2084938.081	750432.371	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CL45-012D	2084938.081	750432.371	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CL45-012D	2084938.081	750432.371	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CJ46-000D	2084589.465	750725.942	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CJ45-000D	2084601.141	750445.715	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CJ45-000D	2084601.141	750445.715	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CJ45-000D	2084601.141	750445.715	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CJ45-001D	2084614.485	750432.371	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CJ45-001D	2084614.485	750432.371	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CJ45-001D	2084614.485	750432.371	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CJ45-002D	2084631.166	750449.051	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
	OPWL Valve Vault Southwestern Side of AOC	CJ45-002D	2084631.166	750449.051	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CJ45-003D	2084624.494	750420.695	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CJ45-003D	2084624.494	750420.695	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CJ45-003D	2084624.494	750420.695	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CJ45-003D	2084624.494	750420.695	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CJ45-004D	2084601.141	750420.695	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CJ45-004D	2084601.141	750420.695	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CJ45-004D	2084601.141	750420.695	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CJ46-000D	2084589.465	750725.942	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CJ46-000D	2084589.465	750725.942	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CJ46-001D	2084609.481	750729.278	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CJ46-001D	2084609.481	750729.278	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CJ46-001D	2084609.481	750729.278	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CJ46-002D	2084599.473	750722.606	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CJ46-002D	2084599.473	750722.606	Subsurface Soil	4.5'-6.5'	Metals	6200	6010

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Onsite Method	Offsite Laboratory Method
		CJ46-002D	2084599.473	750722.606	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CJ46-002D	2084599.473	750722.606	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CJ46-003D	2084609.481	750714.266	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CJ46-003D	2084609.481	750714.266	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CJ46-003D	2084609.481	750714.266	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CJ46-004D	2084591.133	750714.266	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CJ46-004D	2084591.133	750714.266	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CJ46-004D	2084591.133	750714.266	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CH48-000D	2084272.542	751019.513	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CH48-000D	2084272.542	751019.513	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
Potential Leaking OPWL		CH48-000D	2084272.542	751019.513	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CK48-002D	2084836.332	751002.833	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CK48-002D	2084836.332	751002.833	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CK48-002D	2084836.332	751002.833	Subsurface Soil	4.5'-6.5'	Nitrate	N/A	9056
		CK48-003A	2084895.607	751054.361	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CK48-003A	2084895.607	751054.361	Surface Soil	0-0.5'	Metals	6200	6010
		CK48-003A	2084895.607	751054.361	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CK48-003B	2084895.607	751054.361	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CK48-003B	2084895.607	751054.361	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CK48-003B	2084895.607	751054.361	Subsurface Soil	0.5'-2.5'	Nitrate	N/A	9056
Miscellaneous Sumps		CK48-003C	2084895.607	751054.361	Subsurface Soil	2.5'-4.5'	Radionuclides	HPGe	Alpha Spec
		CK48-003C	2084895.607	751054.361	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CK48-003C	2084895.607	751054.361	Subsurface Soil	2.5'-4.5'	Nitrate	N/A	9056
		CK48-004A	2084913.541	751057.777	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CK48-004A	2084913.541	751057.777	Surface Soil	0-0.5'	Metals	6200	6010
		CK48-004A	2084913.541	751057.777	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CK48-004B	2084913.541	751057.777	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CK48-004B	2084913.541	751057.777	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CK48-004B	2084913.541	751057.777	Subsurface Soil	0.5'-2.5'	Nitrate	N/A	9056
		CK48-004C	2084913.541	751057.777	Subsurface Soil	2.5'-4.5'	Radionuclides	HPGe	Alpha Spec

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Onsite Method	Offsite Laboratory Method
		CK48-004C	2084913.541	751057.777	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CK48-004C	2084913.541	751057.777	Subsurface Soil	2.5'-4.5'	Nitrate	N/A	9056
		CK48-005A	2084905.001	751041.551	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CK48-005A	2084905.001	751041.551	Surface Soil	0-0.5'	Metals	6200	6010
		CK48-005A	2084905.001	751041.551	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CK48-005B	2084905.001	751041.551	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CK48-005B	2084905.001	751041.551	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CK48-005B	2084905.001	751041.551	Subsurface Soil	0.5'-2.5'	Nitrate	N/A	9056
		CK48-005C	2084905.001	751041.551	Subsurface Soil	2.5'-4.5'	Radionuclides	HPGe	Alpha Spec
		CK48-005C	2084905.001	751041.551	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CK48-005C	2084905.001	751041.551	Subsurface Soil	2.5'-4.5'	Nitrate	N/A	9056
		CM48-002A	2085162.062	751026.179	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CM48-002A	2085162.062	751026.179	Surface Soil	0-0.5'	Metals	6200	6010
		CM48-002A	2085162.062	751026.179	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CM48-002B	2085162.062	751026.179	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CM48-002B	2085162.062	751026.179	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CM48-002B	2085162.062	751026.179	Subsurface Soil	0.5'-2.5'	Nitrate	N/A	9056
		CM48-002C	2085162.062	751026.179	Subsurface Soil	2.5'-4.5'	Radionuclides	HPGe	Alpha Spec
		CM48-002C	2085162.062	751026.179	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CM48-002C	2085162.062	751026.179	Subsurface Soil	2.5'-4.5'	Nitrate	N/A	9056
		CM48-003A	2085153.522	751013.368	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CM48-003A	2085153.522	751013.368	Surface Soil	0-0.5'	Metals	6200	6010
		CM48-003A	2085153.522	751013.368	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CM48-003B	2085153.522	751013.368	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CM48-003B	2085153.522	751013.368	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CM48-003B	2085153.522	751013.368	Subsurface Soil	0.5'-2.5'	Nitrate	N/A	9056
		CM48-003C	2085153.522	751013.368	Subsurface Soil	2.5'-4.5'	Radionuclides	HPGe	Alpha Spec
		CM48-003C	2085153.522	751013.368	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CM48-003C	2085153.522	751013.368	Subsurface Soil	2.5'-4.5'	Nitrate	N/A	9056
		CM48-004A	2085168.895	751012.514	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Onsite Method	Offsite Laboratory Method
		CM48-004A	2085168.895	751012.514	Surface Soil	0-0.5'	Metals	6200	6010
		CM48-004A	2085168.895	751012.514	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CM48-004B	2085168.895	751012.514	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CM48-004B	2085168.895	751012.514	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CM48-004B	2085168.895	751012.514	Subsurface Soil	0.5'-2.5'	Nitrate	N/A	9056
		CM48-004C	2085168.895	751012.514	Subsurface Soil	2.5'-4.5'	Radionuclides	HPGe	Alpha Spec
		CM48-004C	2085168.895	751012.514	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CM48-005A	2085191.099	751005.682	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CM48-005A	2085191.099	751005.682	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CM48-005A	2085191.099	751005.682	Surface Soil	0-0.5'	Metals	6200	6010
		CM48-005B	2085191.099	751005.682	Subsurface Soil	0.5'-2.5'	Nitrate	N/A	9056
		CM48-005B	2085191.099	751005.682	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CM48-005C	2085191.099	751005.682	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CM48-005C	2085191.099	751005.682	Subsurface Soil	2.5'-4.5'	Nitrate	N/A	9056
		CM48-006A	2085181.705	750992.017	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CM48-006A	2085181.705	750992.017	Surface Soil	0-0.5'	Metals	6200	6010
		CM48-006A	2085181.705	750992.017	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CM48-006B	2085181.705	750992.017	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CM48-006B	2085181.705	750992.017	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CM48-006B	2085181.705	750992.017	Subsurface Soil	0.5'-2.5'	Nitrate	N/A	9056
		CM48-006C	2085181.705	750992.017	Subsurface Soil	2.5'-4.5'	Radionuclides	HPGe	Alpha Spec
		CM48-006C	2085181.705	750992.017	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CM48-006C	2085181.705	750992.017	Subsurface Soil	2.5'-4.5'	Nitrate	N/A	9056
		CM48-007A	2085201.348	750992.872	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CM48-007A	2085201.348	750992.872	Surface Soil	0-0.5'	Metals	6200	6010
		CM48-007A	2085201.348	750992.872	Surface Soil	0-0.5'	Nitrate	N/A	9056
		CM48-007B	2085201.348	750992.872	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CM48-007B	2085201.348	750992.872	Subsurface Soil	0.5'-2.5'	Metals	6200	6010

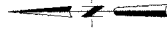
IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Onsite Method	Offsite Laboratory Method
Area Potentially Affected by Regrading		CM48-007B	2085201.348	750992.872	Subsurface Soil	0.5'-2.5'	Nitrate	N/A	9056
		CM48-007C	2085201.348	750992.872	Subsurface Soil	2.5'-4.5'	Radionuclides	HPGe	Alpha Spec
		CM48-007C	2085201.348	750992.872	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CM48-007C	2085201.348	750992.872	Subsurface Soil	2.5'-4.5'	Nitrate	N/A	9056
		CQ47-000A	2085954.486	750871.524	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CQ47-000A	2085954.486	750871.524	Surface Soil	0-0.5'	Metals	6200	6010
		CQ47-000B	2085954.486	750871.524	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CQ47-000B	2085954.486	750871.524	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CQ47-000B	2085954.486	750871.524	Subsurface Soil	0.5'-2.5'	VOCs	8260	8260
		CQ47-000C	2085954.486	750871.524	Subsurface Soil	2.5'-4.5'	Radionuclides	HPGe	Alpha Spec
		CQ47-000C	2085954.486	750871.524	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CQ47-000C	2085954.486	750871.524	Subsurface Soil	2.5'-4.5'	VOCs	8260	8260
		CQ47-000D	2085954.486	750871.524	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CQ47-000D	2085954.486	750871.524	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CQ47-000D	2085954.486	750871.524	Subsurface Soil	4.5'-6.5'	VOCs	8260	8260
		CQ47-000E	2085954.486	750871.524	Subsurface Soil	6.5'-8.5'	Radionuclides	HPGe	Alpha Spec
		CQ47-000E	2085954.486	750871.524	Subsurface Soil	6.5'-8.5'	Metals	6200	6010
		CQ47-000E	2085954.486	750871.524	Subsurface Soil	6.5'-8.5'	VOCs	8260	8260
		CQ47-000F	2085954.486	750871.524	Subsurface Soil	8.5'-10.5'	Radionuclides	HPGe	Alpha Spec
		CQ47-000F	2085954.486	750871.524	Subsurface Soil	8.5'-10.5'	Metals	6200	6010
		CQ47-000F	2085954.486	750871.524	Subsurface Soil	8.5'-10.5'	VOCs	8260	8260
		CR45-000A	2086322.754	750535.280	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CR45-000A	2086322.754	750535.280	Surface Soil	0-0.5'	Metals	6200	6010
		CR45-000B	2086322.754	750535.280	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CR45-000B	2086322.754	750535.280	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CR45-000B	2086322.754	750535.280	Subsurface Soil	0.5'-2.5'	VOCs	8260	8260
		CR45-000C	2086322.754	750535.280	Subsurface Soil	2.5'-4.5'	Radionuclides	HPGe	Alpha Spec
		CR45-000C	2086322.754	750535.280	Subsurface Soil	2.5'-4.5'	Metals	6200	6010
		CR45-000C	2086322.754	750535.280	Subsurface Soil	2.5'-4.5'	VOCs	8260	8260

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Onsite Method	Offsite Laboratory Method
		CR45-000D	2086322.754	750535.280	Subsurface Soil	4.5'-6.5'	Radionuclides	HPGe	Alpha Spec
		CR45-000D	2086322.754	750535.280	Subsurface Soil	4.5'-6.5'	Metals	6200	6010
		CR45-000D	2086322.754	750535.280	Subsurface Soil	4.5'-6.5'	VOCs	8260	8260
		CR45-000E	2086322.754	750535.280	Subsurface Soil	6.5'-8.5'	Radionuclides	HPGe	Alpha Spec
		CR45-000E	2086322.754	750535.280	Subsurface Soil	6.5'-8.5'	Metals	6200	6010
		CR45-000E	2086322.754	750535.280	Subsurface Soil	6.5'-8.5'	VOCs	8260	8260
		CR45-000F	2086322.754	750535.280	Subsurface Soil	8.5'-10.5'	Radionuclides	HPGe	Alpha Spec
		CR45-000F	2086322.754	750535.280	Subsurface Soil	8.5'-10.5'	Metals	6200	6010
		CR45-000F	2086322.754	750535.280	Subsurface Soil	8.5'-10.5'	VOCs	8260	8260

Figure 1
IA Groups Location Map

- EXPLANATION**
- Solar Evaporation Pond Area of Concern
- Standard Map Features**
- Buildings and other structures
 - Solar Evaporation Ponds (SEPs)
 - Lakes and ponds
 - Streams, ditches, or other drainage features
 - Fences and other barriers
 - Topographic Contour (20-Foot)
 - Paved roads
 - Dirt roads

DATA SOURCE BASE FEATURES:
Buildings, fences, hydrography, roads and other structures were derived from aerial photography (1994-1995) and other data. Topographic contours were derived from digital elevation data (1994-1995) and other data. The data was processed using ESRI Arc TN and L ATICE to produce the final map. The data was processed using ESRI Arc TN and L ATICE to produce the final map. The data was processed using ESRI Arc TN and L ATICE to produce the final map.



Scale = 1 : 7580
1 inch represents approximately 632 feet



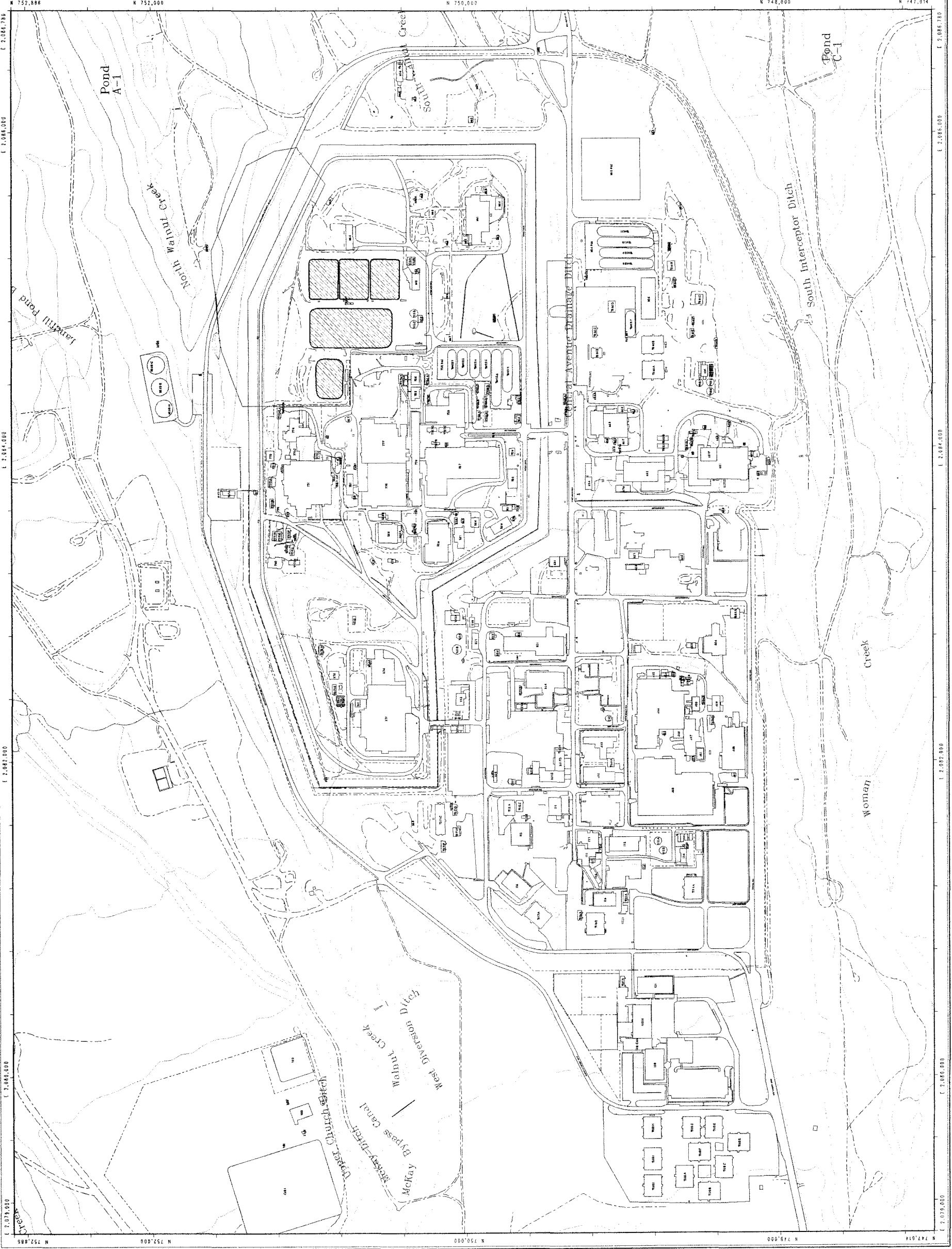
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by:
DynCorp
THE ART OF TECHNOLOGY

Prepared for:
KAISER-HILL
CORPORATION

August 05, 2002



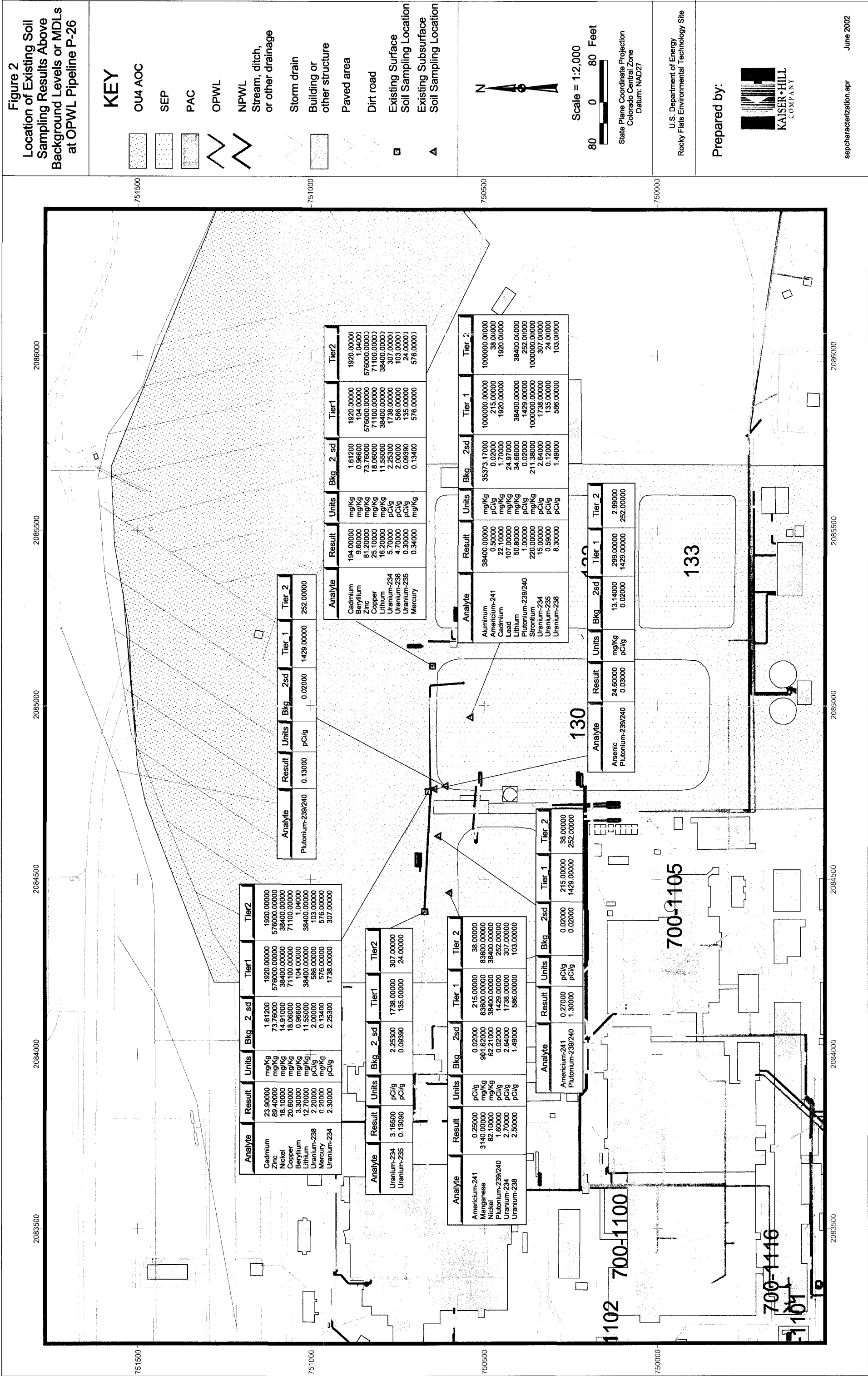


Figure 4
Location of Existing Soil
Sampling Results Above
Background Levels or MDLs
OPWL P-40

KEY

Stream, ditch,
or other drainage

Existing Surface

Existing Subsystems



Scale = 1:3500



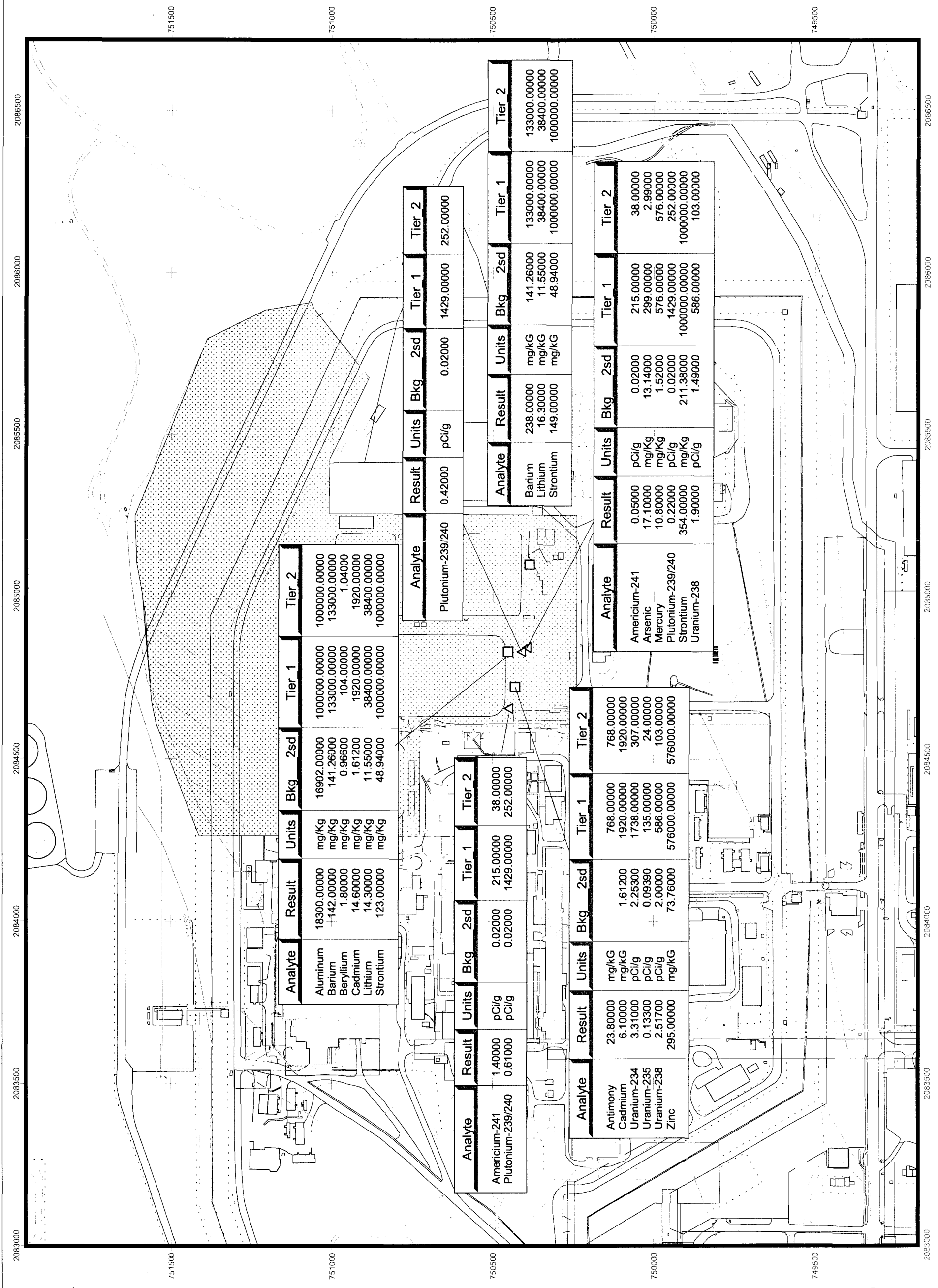
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

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Prepared by:



sepcharacterization.apr
June 2002



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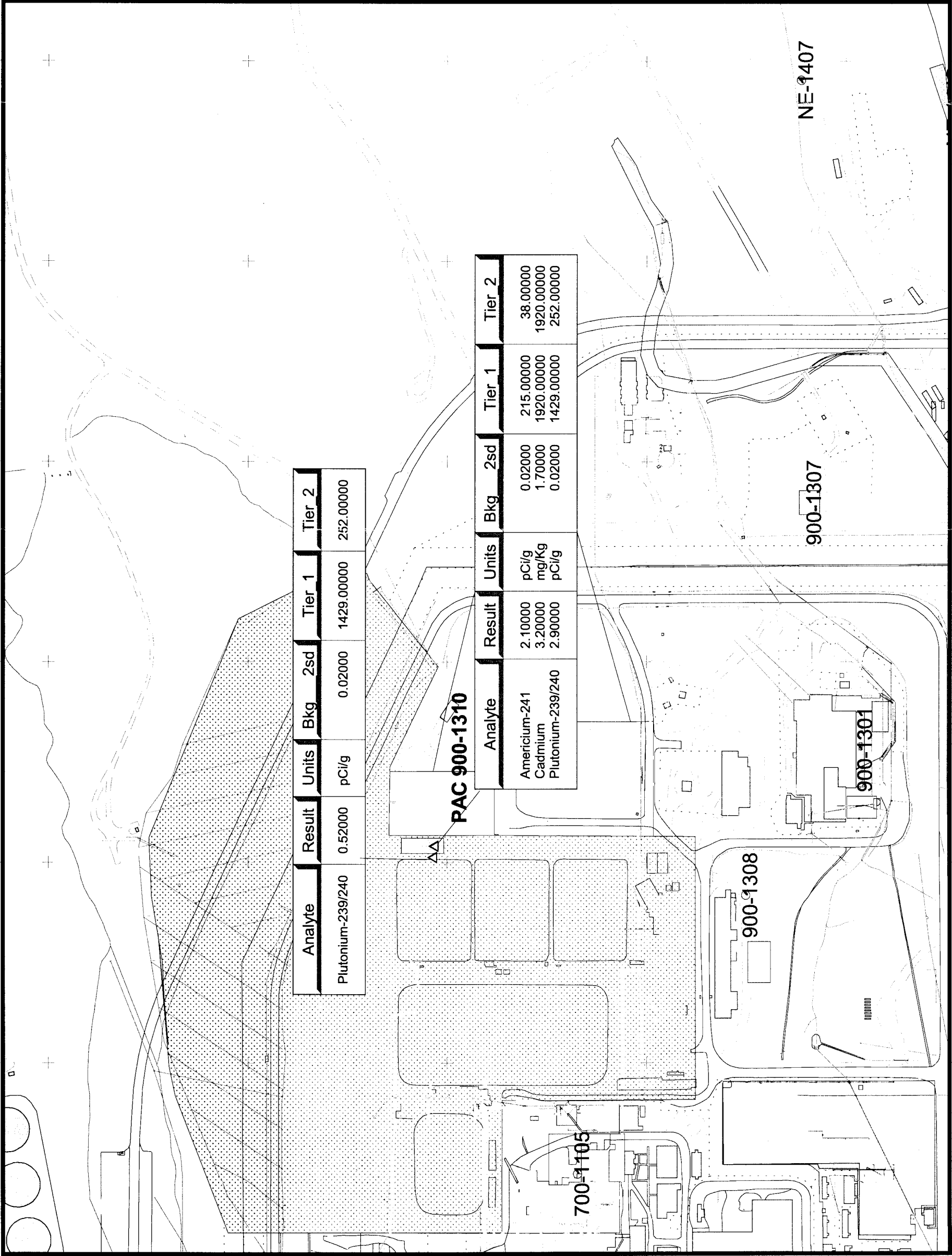


Figure 5
Location of Existing Soil
Sampling Results Greater
Than Background or MDLs
PAC 900-1310

KEY



OU4 AOC



SEP



PAC



OPWL



NPWL

Stream, ditch,
or other drainage



Storm drain



Building or
other structure



Paved area



Dirt road



Existing Surface
Soil Sampling Location



Existing Subsurface
Soil Sampling Location



Scale = 1:1200

80 0 80 160 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by:



sepharacterization.apr June 2002

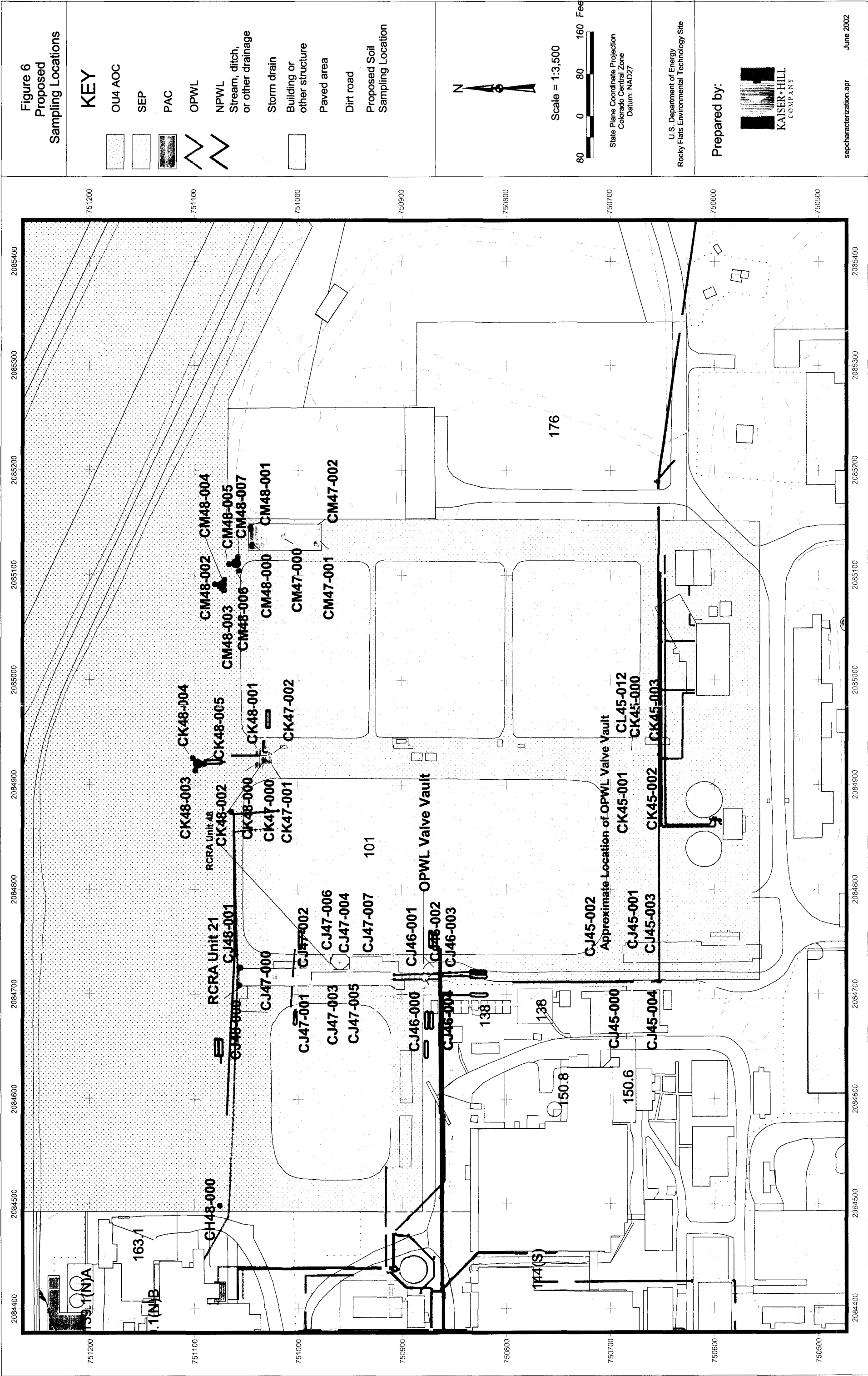


Figure 7
Area Affected By Regrading
Analytes Greater Than
Background and Detection
Limits

Key

- Sampling Locations
- Buildings and other structures
- Process Waste Lines
- Old Process Waste Lines
- Dirt roads
- Paved areas
- Drainage Features
- IHSS 165
- Area Affected By Regrading
- Solar Ponds AOC
- Background: Mean + 2SD
- RDL: Reportable Detection Limit



Scale 1:2500



State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

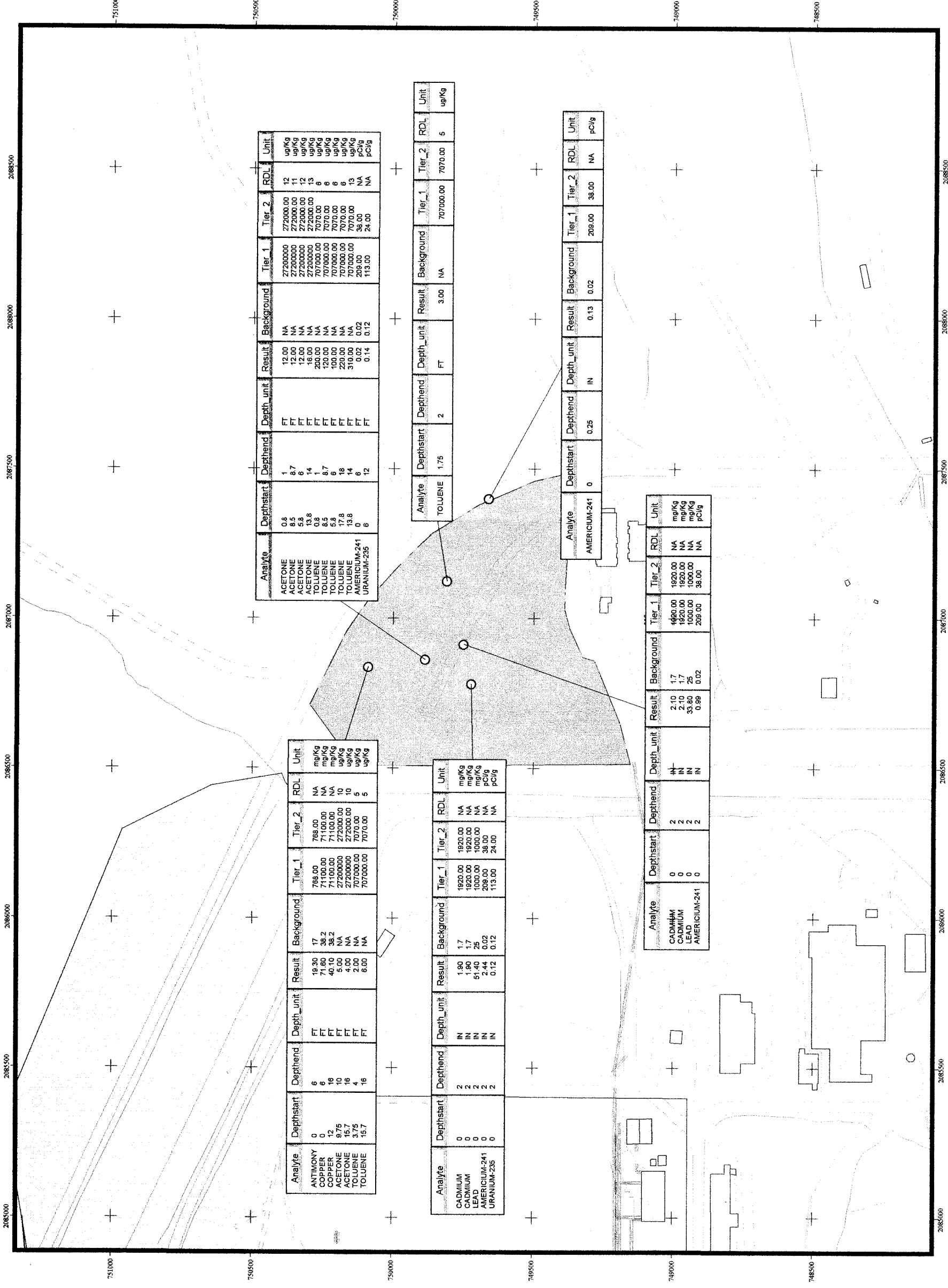
U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by:



Solar Ponds

July 2002



Analyte	Depthstart	Depthend	Depth_unit	Result	Background	Tier_1	Tier_2	RDL	Unit
ACETONE	0.8	1	FT	12.00	NA	2720000.00	2720000.00	12	ug/Kg
ACETONE	8.5	8.7	FT	12.00	NA	2720000.00	2720000.00	11	ug/Kg
ACETONE	13.8	14	FT	12.00	NA	2720000.00	2720000.00	13	ug/Kg
TOLUENE	0.8	1	FT	200.00	NA	7070000.00	7070000.00	6	ug/Kg
TOLUENE	8.5	8.7	FT	120.00	NA	7070000.00	7070000.00	6	ug/Kg
TOLUENE	17.8	18	FT	100.00	NA	7070000.00	7070000.00	6	ug/Kg
TOLUENE	13.8	14	FT	310.00	NA	7070000.00	7070000.00	13	ug/Kg
AMERICIUM-241	0	6	FT	0.02	0.12	209.00	209.00	38.00	pCi/g
AMERICIUM-235	0	12	FT	0.14	113.00	7070000.00	7070000.00	NA	pCi/g

Analyte	Depthstart	Depthend	Depth_unit	Result	Background	Tier_1	Tier_2	RDL	Unit
TOLUENE	1.75	2	FT	3.00	NA	7070000.00	7070000.00	5	ug/Kg

Analyte	Depthstart	Depthend	Depth_unit	Result	Background	Tier_1	Tier_2	RDL	Unit
AMERICIUM-241	0	0.25	IN	0.13	0.02	209.00	209.00	38.00	pCi/g

Analyte	Depthstart	Depthend	Depth_unit	Result	Background	Tier_1	Tier_2	RDL	Unit
ANTIMONY	0	6	FT	19.30	17	768.00	768.00	NA	mg/Kg
COPPER	0	6	FT	71.80	38.2	7110000.00	7110000.00	NA	mg/Kg
ACETONE	12	16	FT	40.10	NA	2720000.00	2720000.00	10	ug/Kg
ACETONE	16.5	18	FT	5.00	NA	2720000.00	2720000.00	6	ug/Kg
TOLUENE	3.75	4	FT	2.00	NA	7070000.00	7070000.00	5	ug/Kg
TOLUENE	15.7	16	FT	6.00	NA	7070000.00	7070000.00	5	ug/Kg

Analyte	Depthstart	Depthend	Depth_unit	Result	Background	Tier_1	Tier_2	RDL	Unit
CADMIUM	0	2	IN	1.90	1.7	1920.00	1920.00	NA	mg/Kg
CADMIUM	0	2	IN	1.80	1.7	1920.00	1920.00	NA	mg/Kg
LEAD	0	2	IN	51.40	25	1000.00	1000.00	NA	pCi/g
AMERICIUM-241	0	2	IN	2.44	0.02	209.00	209.00	38.00	pCi/g
AMERICIUM-235	0	2	IN	0.12	0.12	113.00	113.00	24.00	pCi/g

Analyte	Depthstart	Depthend	Depth_unit	Result	Background	Tier_1	Tier_2	RDL	Unit
CADMIUM	0	2	IN	2.10	1.7	1920.00	1920.00	NA	mg/Kg
CADMIUM	0	2	IN	2.10	1.7	1920.00	1920.00	NA	mg/Kg
LEAD	0	2	IN	33.80	25	1000.00	1000.00	NA	pCi/g
AMERICIUM-241	0	2	IN	0.99	0.02	209.00	209.00	38.00	pCi/g

